

FORM PTO-1449 (Modified)				U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: MARKWELL-02677		Serial No.: 08/811,473	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)						Applicant: Mark C. Shults <i>et al.</i>			
(37 CFR § 1.98(b))						Filing Date: 03/04/97		Group Art Unit: 3301	
U.S. PATENT DOCUMENTS									
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee		Class	Subclass	Filing Date	
RC	1	4,757,022	07/12/88	Shults <i>et al.</i>		435	291	11/19/87	
RC	2	4,994,167	02/19/91	Shults <i>et al.</i>		204	403	07/07/88	
RC	3	5,380,536	01/10/95	Hubbell <i>et al.</i>		424		RECEIVED 08/05/91	
RC	4	5,497,772	03/12/96	Schulman <i>et al.</i>		128	635	11/19/93	
RC	5	4,787,398	11/29/88	Garcia <i>et al.</i>		128	770	07/25/86	
RC	6	5,321,414	06/14/94	Alden <i>et al.</i>		343	816	08/20/93	
RC	7	4,823,808	04/25/89	Clegg <i>et al.</i>		128	773	07/06/87	
RC	8	4,703,756	11/03/87	Gough <i>et al.</i>		123	635	05/06/86	
RC	9	4,431,004	02/14/84	Bessman <i>et al.</i>		128	635	11/27/81	
RC	10	4,803,243	02/07/89	Fujimoto <i>et al.</i>		525	100	03/35/87	
RC	11	4,686,044	08/11/87	Behnke <i>et al.</i>		210	500.22	12/09/85	
RC	12	5,453,278	09/26/95	Chan <i>et al.</i>		424	422	01/28/94	
RC	13	5,469,846	11/28/95	Khan		128	635	09/27/94	
RC	14	5,431,160	07/11/95	Wilkins		128	635	11/09/93	
RC	15	5,660,163	08/26/97	Schulman <i>et al.</i>		126	635	05/18/95	
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RC	17	4,902,294	02/20/90	Gosserez		623	8	11/30/87	
RC	18	4,353,888	10/12/82	Sefton		424	25	12/23/80	
FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS									
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation		
							Yes	No	
RC	19	WO 94/22367	13.10.94	WIPO					
RC	20	WO 96/32076	17.10.96	WIPO					
RC	21	WO 96/01611	25.01.96	WIPO					
RC	22	WO 92/07525	14.05.92	WIPO					
RC	23	WO 92/13271	06.08.92	WIPO					
RC	24	WO 96/36296	21.11.96	WIPO					
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)									
RC	25	Updike <i>et al.</i> , "Laboratory Evaluation of New Reusable Blood Glucose Sensor," <i>Diabetes Care</i> , 11:801-807 (1988)							
RC	26	Moatti-Sirat <i>et al.</i> , "Towards Continuous Glucose Monitoring: <i>In Vivo</i> Evaluation of a Miniaturized Glucose Sensor Implanted for Several Days in Rat Subcutaneous Tissue," <i>Diabetologia</i> 35:224-30 (1992)							
RC	27	Armour <i>et al.</i> , "Application of Chronic Intravascular Blood Glucose Sensor in Dogs," <i>Diabetes</i> 39:1519-26 (1990)							
RC	28	Woodward, "How Fibroblasts and Giant Cells Encapsulate Implants: Considerations in Design of Glucose Sensors," <i>Diabetes Care</i> 5:278-281 (1982)							
RC	29	Bindra <i>et al.</i> , "Design and <i>In Vitro</i> Studies of a Needle-Type Glucose Sensor for Subcutaneous Monitoring," <i>Anal. Chem.</i> 63:1692-96 (1991)							
RC	30	Shults <i>et al.</i> , A Telemetry-Instrumentation System for Monitoring Multiple Subcutaneously Impaired Glucose Sensors," <i>IEEE Trans. Biomed. Eng.</i> 41:937-942 (1994)							

Examiner:

Date Considered:

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

RC	32	Phillips and Smith, "Biomedical Applications of Polyurethanes: Implications of Failure Mechanisms," <i>J. Biomat. Appl.</i> , 3:202-227 (1988)
RC	33	Stokes, "Polyether Polyurethanes: Biostable or Not?," <i>J. Biomat. Appl.</i> , 3:228-259 (1988)
RC	34	Updike <i>et al.</i> , Enzymatic Glucose Sensors: Improved Long-Term Performance <i>In Vitro</i> and <i>In Vivo</i> , " <i>Am. Soc. Artificial Internal Organs</i> 40:157-163 (1994)
RC	35	Updike <i>et al.</i> , "Implanting the Glucose Enzyme Electrode: Problems, Progress, and Alternative Solutions," <i>Diabetes Care</i> 5:207-21 (1982)
RC	36	Rhodes <i>et al.</i> , "Prediction of Pocket-Portable and Implantable Glucose Enzyme Electrode Performance from Combined Species Permeability and Digital Simulation Analysis," <i>Anal. Chem.</i> 66:1520-1529 (1994)
RC	37	Tse and Gough, Time-Dependent Inactivation of Immobilized Glucose Oxidase and Catalase, " <i>Biotechnol. Bioeng.</i> 29:705-713 (1987)
RC	38	Gilligan <i>et al.</i> , "Evaluation of a Subcutaneous Glucose Sensor Out to 3 Months in a Dog Model," <i>Diabetes Care</i> 17:882-887 (1994)
RC	39	McKean and Gough, "A Telemetry-Instrumentation System for Chronically Implanted Glucose and Oxygen Sensors," <i>IEEE Trans. Biomed. Eng.</i> 35:526-532 (1988)
RC	40	Shichiri <i>et al.</i> , "Telemetry Glucose Monitoring Device With Needle-Type Glucose Sensor: A Useful Tool for Blood Glucose Monitoring in Diabetic Individuals," <i>Diabetes Care</i> 9:298-301 (1986)
RC	41	Lyman, "Polyurethanes. I. The Solution Polymerization of Diisocyanates with Ethylene Glycol," <i>J. Polymer Sci.</i> 45:49 (1960)
RC	42	DuPont ¹ Dimension AR [®] (Catalog)
RC	43	DIRECT 30/30 [®] meter (Markwell Medical) (Catalog)
RC	44	Fischer <i>et al.</i> , "Oxygen Tension at the Subcutaneous Implantation Site of Glucose Sensors," <i>Biomed. Biochim.</i> 11/12, 965-971 (1989)
RC	45	Brauker <i>et al.</i> , "Neovascularization of Synthetic Membranes Directed by Membrane Microarchitecture," <i>Journal of Biomedical Materials Research</i> 29:1517-1524 (1995)
RC	46	Abstract presented by James Brauker, Ph.D., "Neovascularization of Cell Transplantation Devices: Membrane Architecture-Driven and Implanted Tissue-Driven Vascularization," <i>Baxter Healthcare Corp.</i>

Examiner: *Ryan Carter*Date Considered: *12/3/98*

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¹ Please note that Dade International purchased this product line from DuPont. A Dade catalog is therefore provided which sets out a functional overview of the Dimension AR apparatus.